

ABSTRACT

The invention relates to a zeolite of the ZSM-12 type, especially for the hydroisomerization of higher paraffins, which has a primary crystal size of $\leq 0.1 \mu\text{m}$; as well as a specific volume, determined by mercury porosimetry at a maximum pressure of 4000 bar, of $30\text{--}200 \text{ mm}^3/\text{g}$ in a pore radius range of 4-10 nm; and which has further been prepared from a synthesis gel composition comprising an aluminum source, precipitated silica as a silicon source, TEA^+ as a template, an alkali metal and/or alkaline earth metal ion source M having the valency n; in which the molar $\text{H}_2\text{O}:\text{SiO}_2$ ratio is selected between 5 and 15. The invention further relates to a catalyst comprising the above zeolite and its use.